BUS750: Doctoral Research Methods IV (Regression Models)
Fall 2024
Synchronous sessions from 2000 to 2130 (Eastern) on
Wednesday Aug 21; Sep 4, 18; Oct 2, 16, 30; Nov 13

INSTRUCTOR INFORMATION
Name: Arran Caza
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OFFICE HOURS
- I will have office hours on Teams from 2000 to 2130 (Eastern) on the Wednesdays and Thursdays listed below.
    - Wednesday Aug 28; Sep 11, 25; Oct 9, 23; Nov 6, 20
    - Thursday Sep 5, 19; Oct 3, 17 [NOT Oct 31]; Nov 14
- I'm sharing my office hours between two classes (BUS701 and BUS750).
    - Sharing maximizes my availability, and thus your convenience. I'll respond to folks on a first-come first-served basis.
    - Sharing creates the potential for me to give answers to small groups and thus counter both pluralistic ignorance and imposter syndrome, while creating a potential opportunity for the two cohorts to interact.
    - However, based on previous years, I suspect few students will use my office hours, so crowding and wait times are unlikely to be an issue.
- If you need to meet but cannot attend a scheduled session, email me and we will find an alternate time to talk.
- The Teams link for office hours is available in Canvas. It is *different* from the synchronous meeting link. Synchronous class sessions have an entry in the left-hand navigation panel ("Microsoft Teams Meetings"). For office hours, go the first module in Canvas ("Course Info") at the top of the Home page and use the "Teams for Office Hours" link.

COMMUNICATION
- Email is the best way to reach me.
    - It is also the way I will most frequently communicate with you.
    - When emailing me, please use your UNCG email address. FERPA requires me to use your UNCG-issued address.
- I usually check my email once each business day (Monday through Friday).
- You should typically receive a response from me within two business days.
- Synchronous sessions will be held, recorded, and stored through MS Teams, because UNCG policy requires me to do so. I won't use other Teams functions. I do not suggest trying to communicate with

me through Teams (use email instead), and all course materials will be on the Canvas course site, not in Teams.

CATALOG COURSE DESCRIPTION
Techniques of estimating multivariate relationships. Discusses multiple regression and problems associated with single equation modeling, moderation and mediation analysis, structural equation modeling, and hierarchical linear modeling.

COURSE DESCRIPTION
This course assumes you are already familiar with the content of BUS701 (Doctoral Research Methods I: Quantitative Research Methods) and introductory statistics. We will build on and extend that previous quantitative training. You will be introduced to the more complex models mentioned in the catalog description above. Please note that each of those models can be -- and frequently is -- the basis of a semester-long course by itself. As a result, we will not be able to address all the details. Our focus will be on giving you a conceptual understanding of the foundations of each topic, so that you can learn more about these topics on your own.

TEACHING METHODS
The course will be delivered in seminar format. There will be live synchronous sessions every two weeks on the dates listed at the top of this syllabus. These sessions will be discussion-based, addressing the readings, the homework, and your own emerging research projects. You will have reading and homework exercises to complete before each synchronous meeting.

REQUIRED TEXTS/READINGS/REFERENCES
Required readings will consist of textbook chapters and assigned articles. The specific readings for each unit are in a separate document on Canvas (see "BUS750-ReadingList.pdf").

Required textbooks:

- Aguinis, H. (2024). *Research Methodology: Best Practices for Rigorous, Credible, and Impactful Research*. SAGE Publications, Inc.
- Fox, J., & Weisberg, S. (2019). *An R companion to applied regression* (3rd ed.). SAGE.

Assigned articles that are available from the UNCG library are not on Canvas. You should seek them out yourself, for three reasons: (a) accessing the articles directly will allow you to get them in the format that best suits your learning needs (e.g., EPUB vs PDF, screen reader enabled, etc.); (b) getting them yourself will allow you to integrate the articles into your reference manager of choice; and (c) when you get the articles, you will incidentally be exposed to other articles, any of which may provide a lead that advances your personal research.

The statistical elements of the course will be taught using R, which is a software platform for all kinds of analysis and graphical presentation. R is freely available for all types of computers (https://www.r-project.org/). Many people find that the base R environment is less than ideal to interact with, and they often choose to use another program as an interface between themselves and R (in technical terms, this is an IDE -- integrated development environment). In this course, I will use the RStudio IDE (https://rstudio.com/), because it is open source, cross-platform, and freely available. You can interact with R in any way you prefer.

You are not required to use R. If you prefer to use another software application you may (e.g., SAS, Stata), however there are four things to keep in mind if you choose to not use R: (1) you need to be sure that your chosen software can perform all of the required analyses; (2) it is your responsibility to make your output and

reports comparable to those produced by R (e.g., I'm not very familiar with SAS, so you'd need to make sure I can understand what you produce); (3) I am unlikely to be able to help you with the technical details of conducting analysis in any software other than R; and (4) I am going to use R and the textbook uses R, so all examples will be in R.

STUDENT LEARNING OUTCOMES (SLOs)

Upon successful completion of this course, students will be able to

1. Demonstrate the ability to solve problems using regression models and multivariate techniques.
2. Demonstrate knowledge of the use of regression models in empirical research in organizations.
3. Apply the statistical knowledge to analyze individual, firm and country-level data using statistical software.
4. Evaluate the regression models and multivariate techniques used in empirical research in business and management.

ASSIGNMENTS FOR ACHIEVING LEARNING OUTCOMES

There will be a total of seven (7) deliverables, each of which supports all four of the course SLOs. Separate documents, available on Canvas, will provide detailed instructions.

Assignments (60%): There will be seven (7) homework assignments. Each assignment will have two parts -- conducting and interpreting analysis that I assign; and progressing your final paper. The assignments are due the second Sunday after class sessions, specifically on or before Sep 1, Sep 15, Sep 29, Oct 13, Oct 27, Nov 10, Nov 24.

Final paper (40%): The final paper is due on or before Dec 1. It will be a **complete paper**, not a proposal. You're going to need data, analysis, and results.

ASSIGNMENT SUBMISSION AND FORMAT

- Specific details are given on Canvas for each assignment type.
- Be sure to follow all assignment-specific instructions.
- Submit all written assignments electronically through Canvas before the associated deadline.
- No late submissions will be accepted.
- Please submit your work in either Word (DOC, DOCX) or rich text format (RTF) only.
    - PDF submissions will NOT be accepted.
- The program has instituted a policy of requiring plagiarism checks for all assignments. Your submitted work will be processed by TurnItIn.

POLICY ON LATE WORK & EXTRA CREDIT

All assignments are due at 11:59PM on the stated date. Late submissions are not accepted. Extra credit will not be available.

EVALUATION AND GRADING

Final scores will be based on the weights given above and converted to letter grades as indicated below.

Letter Grade	**% points accumulated**
A	94 – 100

A-	90 - 93.99
B+	86 - 89.99
B	82 - 85.99
B-	78 - 81.99
C	70 - 77.99
F	<70

I will give each deliverable that you submit a letter score, using the criteria below.

- A = Exceptional work. Relative to the assignment instructions, this work had all four of the following qualities:
    - It did everything required by the instructions.
    - It had no more than minor errors or problems.
    - It was done in a clear fashion that was easy to understand.
    - It was done in a convincing fashion.
- A- = Very strong work. Relative to the assignment instructions, this work did everything required by the instructions, had only minor errors, and had at least one of the following two qualities:
    - It was done in clear fashion that was easy to understand.
    - It was done in a convincing fashion.
- B+ = Strong work. Relative to the assignment instructions, this work did everything required by the instructions and had only minor errors.
- B = Good work. Relative to the assignment instructions, this work did everything required by the instructions, but contained meaningful errors.
- B- = Needs improvement. This assignment did not do everything required by the instructions or it contained fundamental errors.
- C = Unsatisfactory work. This assignment did not do everything required by the instructions and it contained fundamental errors.
- F = No valid submission. Either the work was not submitted appropriately on time, or it failed to address many of the assignment's requirements and contained fundamental errors.

ACADEMIC INTEGRITY POLICY

By submitting an assignment, each student is acknowledging their understanding and commitment to the Academic Integrity Policy on all major work for the course. Refer to the following URL: https://osrr.uncg.edu/academic-integrity/.

BRYAN SCHOOL FACULTY AND STUDENT GUIDELINES

Bryan Faculty and students in this course are expected to adhere to the guidelines stated at this link: https://bryan.uncg.edu/wp-content/uploads/2017/08/Faculty-and-Student-Guidelines-2018-2019.pdf

ACCOMMODATIONS

UNCG seeks to comply fully with the Americans with Disabilities Act (ADA). Students requesting accommodations based on a disability must connect with the Office of Accessibility Resources and Services (OARS) in 215 Elliott University Center, (336)334-5440, oars.uncg.edu.

It is expected that instructors will make reasonable accommodations for students who have conflicts due to religious obligations. Please make arrangements with the instructor in advance of any conflict. For more

information on UNCG's Religious Obligations policy, visit:
https://drive.google.com/file/d/0B3_J3Uix1B4UeTV4Nk1vVFJoVFE/view?resourcekey=0-zRdXEmUA6rRI2RzKqo6u3g

The University recognizes the importance of certain extra-curricular and co-curricular activities (including travel days) that enhance student learning, personal development, and professional growth. Instructors will excuse absences of students for participation in University-sponsored events under the following conditions:

1. Students who expect to miss one or more class meetings due to participation in University-sponsored activities should:
    a. Notify the instructor(s) at least five class days in advance;
    b. Arrange to complete all missed work *in advance* of the absence whenever practicable as judged by the instructor(s). When missed work cannot be completed in advance, the instructor(s) should provide students with the opportunity to make up the work. Students should be aware, however, that not all kinds of work can be made up. The instructor(s) have the discretion to deny make-up work if (i) alternative assignments place an unreasonable demand on the instructor, (ii) the original assignment is such that not completing it at the originally assigned time impedes student learning
    c. Present relevant documentation of participation in a relevant University-sponsored activity to the instructor(s) upon request.

Students who expect to miss more than three class periods of any single course of any kind in a term or more than two consecutive meetings of a laboratory course in order to participate in University-sponsored activities should inform the instructor at the beginning of the course. In the case that the faculty member cannot make reasonable accommodations for make-up work, the student may appropriately be advised to drop the course.

Students should remind the instructor in advance when accommodation affects course activities, to ensure that the instructor has updated systems accordingly.

ATTENDANCE POLICY
The course is delivered in online, synchronous format. Attending synchronous sessions is required.

FINAL EXAMINATION
There will not be a final exam.

HEALTH AND WELLNESS
Your health impacts your learning. Throughout your time in college, you may experience a range of health issues that can cause barriers to your learning. These might include physical ailments, illnesses, strained relationships, anxiety, elevated levels of stress, alcohol/drug problems, feeling down, or loss of motivation. Student Health Services and The Counseling Center can help with these or other issues you may be experiencing. You can learn about the free, confidential mental health services available on campus by calling 336-334-5874, visiting the website (https://shs.uncg.edu/) or visiting the Anna M. Gove Student Health Center at 107 Gray Drive. Help is always available.

LEARNING ENVIRONMENT
I want to create a productive and inclusive learning environment of mutual respect. If you experience or witness any instances of inappropriate behavior, you can contact me directly and seek out the following resources:

- UNCG Counseling Center (non-reporting agency/confidential) 336.334.5874
- Murphie Chappell, Title IX Coordinator (reporting agent) 336.256.0362 or mechappe@uncg.edu
- University Police (reporting agent) 336.334.4444

For more information on UNCG's policies regarding harassment, visit the UNCG Sexual Harassment Policy (https://policy.uncg.edu/university_policies/title-ix-policy/).

Likewise, if you are personally dealing with challenges or concerns that are barriers to your success, Student Health Services and The Counseling Center can help. You can learn about the free, confidential mental health services available on campus by calling 336-334-5874, visiting the website for Student Health Services (https://shs.uncg.edu/), or visiting the Anna M. Gove Student Health Center at 107 Gray Drive.

TECHNICAL SUPPORT

Students with technical issues with the course and email should contact 6-TECH for support either by email, phone, or chat (https://uncg.service-now.com/support/). Please also let me know about the issue and if there will be any delays in resolving it.

TOPIC OUTLINE & CALENDAR

It is my intention to follow the calendar as outlined below. However, if the need arises, we may have to adjust it. In all such cases, I will notify all students about the changes.

Live session	Topics	Workflow
Unit 1 Aug 21	Good research Data wrangling	Complete readings before live session Submit unit assignment by Sep 1
Unit 2 Sep 4	Reporting research Regression	Complete readings before live session Submit unit assignment by Sep 15
Unit 3 Sep 18	More regression	Complete readings before live session Submit unit assignment by Sep 29
Unit 4 Oct 2	Mediation Moderation	Complete readings before live session Submit unit assignment by Oct 13
Unit 5 Oct 16	Multilevel models	Complete readings before live session Submit unit assignment by Oct 27
Unit 6 Oct 30	Factor analysis	Complete readings before live session Submit unit assignment by Nov 10
Unit 7 Nov 13	Structural equation modeling	Complete readings before live session Submit unit assignment by Nov 24
Bonus unit	Temporal models	Complete readings before Nov 20 so you can ask questions in final office hours
No further meetings. ***Final proposal due no later than Sunday Dec 1***		

END OF SYLLABUS